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Dated: February 27, 2003

Signature: *Gail Miller*
(Gail Miller)

Docket No.: 49581/P030US/10104106

(PATENT)

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3-6-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Carey Ritchey, et al

Application No.: 09/970,351

Group Art Unit: 2817

Filed: October 3, 2001

Examiner: S. Jones

For: **BROADBAND PIN DIODE ATTENUATOR
BIAS NETWORK**

RESPONSE TO ELECTION OF SPECIES REQUIREMENT

Commissioner for Patents
Washington, DC 20231

Dear Sir:

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I. Provisional Election

In response to the Election Requirement mailed January 27, 2003, Applicants hereby provisionally elect the species of Group I corresponding to FIGURE 2. The election is being made WITH TRAVERSE. Claims 1-3, 6-15, 22 through 28, and 37 through 46 read on the provisionally elected species.

II. Generic Claims are Present in the Application

Applicants respectfully submit that contrary to the Election Requirement claims 1, 2, 22 and 23 are generic to the various species indicated by the Election Requirement, as each of these claims read on FIGURES 2, 3 or 4 (M.P.E.P. 806.4(d)).

For example, with respect to claim 1 each of FIGURES 2, 3 and 4 comprise a controllable attenuator (200, 300 or 400) having an RF input port, an RF output port, and a plurality of diodes (at least D1, D2 and D4) disposed in a predetermined network configuration, wherein at least one diode (D2) of said plurality of diodes is disposed in a signal path between said RF input port and said RF output port, and wherein the predetermined network configuration provides a constant DC bias voltage (provided via L1 and/or L2) at a cathode of each diode of said plurality of diodes.

Similarly, for claim 22 FIGURES 2, 3 and 4 comprise a system (200, 300 or 400) for providing controllable attenuation of an RF signal that has an RF input port, an RF output port, a first control signal input port (SP₁), a second control signal input port (SP₂), and a plurality of diodes (at least D1, D2 and D4) disposed in a predetermined network configuration, wherein at least one diode (D2) of said plurality of diodes is disposed in a signal path between said RF input port and said RF output port, wherein an anode of at least one diode (D2) of said plurality of diodes is coupled to said first control signal input and wherein an anode of at least one diode (D1₂, D4₂, D1₃, D4₃, or D3₄) of said plurality of diodes is coupled to said second control signal input.

Therefore, Applicants respectfully assert that at least claims 1 and 22 are generic to the various species indicated by the Election Requirement, as each of these claims read on FIGURES 2, 3 or 4 (M.P.E.P. 806.4(d)).

III. Requirement for Election of Species Improper

The Disclosed Relation Between the Species Identified in the Requirement for Election Has Not Been Addressed to Establish the Propriety of Restriction

“[W]here there is a relationship disclosed between species, such disclosed relation must be discussed and reasons advanced leading to the conclusion that the disclosed relation does not prevent restriction, in order to establish the propriety of restriction,” M.P.E.P. § 808.01(a). Each of the species identified in the requirement for election are taught to be related in the accompanying specification.

The specification clearly teaches that “The preferred embodiment arrangement provides for control current to be applied to the π network shunt diodes and series diode(s) separately,” page 5, line 9; and at page 5, line 23 the specification teaches “As with the preferred embodiment π network discussed above, the preferred embodiment T network arrangement provides for control current to be applied to the T network shunt diode and series diodes separately.” Accordingly, it is clear that the diode arrangements in each of independent claims 1, 22, 37 and 47 and FIGURE 2, 3 and 4 may be used to provide control current to the series diode(s) in accordance with the present invention.

Additionally, the specification clearly teaches that both the π network and the bridge T network attenuator embodiments of the present invention similarly may be optimized for insertion and return loss. At line 13 of page 5, the specification states “the π embodiment allows control of diode currents independently of each other and, therefore, at any given point the preferred embodiment attenuator circuit may be optimized both for insertion loss and return loss.” At line 26 of page 85, for the bridge T embodiment, the specification states “the bridge T embodiment allows control of diode currents independently of each other and, therefore, at any given point the preferred embodiment attenuator circuit may be used to optimize its insertion loss and return loss.”

Therefore, the specification provides that both the π network and bridge T network attenuator embodiments provide for control current to be applied to the network shunt diodes and series diode(s) separately and that both configurations of the attenuator circuit may be optimized for both insertion loss and return loss. Accordingly, there is clearly a relationship disclosed between the species of Group I, Group II and Group III.

M.P.E.P. §806.04(e) provides that “Species are *usually* but not always independent as disclosed (see MPEP § 806.04(b)) since there is usually no disclosure of relationship therebetween.” However, in this case a relationship does exist, as has been shown above. M.P.E.P. §806.04(e) further provides “The fact that a genus for two different embodiments is capable of being conceived and defined, does not affect the independence of the embodiments, where the case under consideration contains no disclosure of any commonality of operation, function or effect.” In the present case, each of the indicated species contain a commonality of operation, function and/or effect as described above. Namely, that both the π network and bridge T network attenuator embodiments provide for control current to be applied to the network shunt diodes and series diode(s) separately and that both

configurations of the attenuator circuit may be optimized for both insertion loss and return loss.

“Where inventions as disclosed and claimed are both (A) species under a claimed genus and (B) related, then the question of restriction must be determined by both the practice applicable to election of species and the practice applicable to other types of restrictions such as those covered in M.P.E.P. § 806.05 - § 806.05(i),” M.P.E.P. § 806.04(b) (emphasis added).

Applicants respectfully assert that the Examiner has not properly established an election requirement under the practice applicable to election of species as the disclosed relation between the species has not been discussed and reasons leading to the conclusion that the disclosed relation does not prevent restriction have not been given as required under M.P.E.P. § 808.01(a).

Applicants further assert that the Examiner has not properly established an election requirement under the practice applicable to election of species as the practice applicable to other types of restrictions has not been applied as required under M.P.E.P. § 806.04(b). For example, the Examiner has not addressed the second of the two criteria for proper requirement for restriction (that there must be a serious burden on the Examiner if restriction is required), see M.P.E.P. § 803.

IV. Conclusion

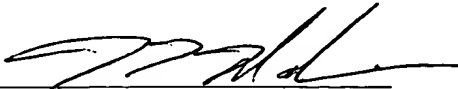
As noted by the Examiner, upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.146. Therefor, upon allowance of claims 1, 2, 22 or 23, all claims of the currently pending claims in this case should be allowed.

An action on the merits of all the claims and a Notice of Allowance thereof are respectfully requested. The Examiner is encourages to call the below named attorney if he can be of any assistance in advancing prosecution of the present application.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 49581/P030US/10104106 from which the undersigned is authorized to draw.

Dated: February 27, 2003

Respectfully submitted,

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